

CLAIMS

What is claimed is:

1. A refuse cart lifting device comprising:
 - a baseplate having a front side and a back side;
 - a motor attached to the front side of the baseplate, the motor having a rotatable shaft;
 - a faceplate, the faceplate having an outer surface and an inner surface, the faceplate also having an upper and a lower end;
 - a saddle fixedly attached to the outer surface of the faceplate;
 - at least one lifting arm having a first end and a second end, the first end of the at least one lifting arm attached to the rotatable shaft, the second end of the at least one lifting arm attached to the faceplate;
 - a sliding latch, the sliding latch having an inner and outer surface, the outer surface in sliding proximity with the inner surface of the faceplate;
 - at least one latch arm, the at least one latch arm having a first end and a second end, the first end of the at least one latch arm pivotally connected to the front side of the baseplate, and the second end of the at least one latch arm pivotally attached to the sliding latch; and
 - the lower end of the faceplate is capable of being retracted below and substantially behind the baseplate when the refuse cart lifting device is not in use, and the upper end of the faceplate is capable of being rotated above and substantially behind the baseplate when the lifting device is emptying a refuse cart.
2. The refuse cart lifting device of claim 1, where the at least one lifting arm is connected to the inner surface of the faceplate.
3. The refuse cart lifting device of claim 1, further comprising a sliding latch guide attached to the inner surface of the faceplate, the sliding latch guide in sliding proximity with the sliding latch.

4. The refuse cart lifting device of claim 1, where the motor is capable of rotating the rotatable shaft at least 210 degrees.

5. The refuse cart lifting device of claim 1, where the at least one lifting arm is shaped to direct the faceplate above and substantially behind the baseplate when the lifter is emptying a refuse cart.

6. A refuse collection vehicle, the refuse collection vehicle including a refuse hopper for the collection of trash, the refuse hopper having a lower hopper edge over which refuse containers are emptied into the refuse hopper, the refuse collection vehicle further including a refuse cart lifting device, the refuse cart lifting device comprising:

- a baseplate attached to the refuse collection vehicle below and adjacent to the hopper edge, the baseplate having a front side facing away from the refuse collection vehicle and a back side facing the refuse collection vehicle;

- a motor attached to the front side of the baseplate, the motor having a rotatable shaft;

- a faceplate, the faceplate having an outer surface and an inner surface, the faceplate also having an upper end and a lower end;

- a saddle fixedly attached to the outer surface of the faceplate;

- at least one lifting arm having a first end and a second end, the first end of the at least one lifting arm attached to the rotatable shaft, the second end of the at least one lifting arm attached to the faceplate;

- a sliding latch, the sliding latch having an inner and outer surface, the outer surface in sliding proximity with the inner surface of the faceplate;

- at least one latch arm, the at least one latch arm having a first end and a second end, the first end of the at least one latch arm pivotally connected to the front side of the baseplate, and the second end of the at least one latch arm pivotally attached to the sliding latch; and

the lower end of the faceplate is capable of being retracted below and substantially behind the baseplate when the refuse cart lifting device is not in use, and the upper end of the

faceplate is capable of being rotated above and substantially inward of the lower hopper edge when the lifting device is emptying a refuse cart.

7. The refuse collection vehicle of claim 6, where the refuse collection vehicle is a rear-loading vehicle.

8. The refuse collection vehicle of claim 6, where the refuse collection vehicle is a side-loading vehicle.

9. The refuse cart lifting device of claim 6, further comprising a sliding latch guide attached to the inner surface of the faceplate, the sliding latch guide in sliding proximity with the sliding latch.

10. The refuse collection vehicle of claim 6, where the at least one lifting arm is shaped to direct the faceplate above and substantially inward of the lower hopper edge when the lifting device is emptying a refuse cart.

11. A method for emptying refuse carts having a first and second lifting point into a refuse collection vehicle with a refuse cart lifter, the refuse collection vehicle including a refuse hopper for the collection of trash, the refuse hopper having a lower hopper edge over which refuse containers are emptied into the refuse hopper, the method comprising:

operating the refuse cart lifter from a retracted position below and substantially inward of the lower hopper edge to a position where the refuse cart lifter engages the first lifting point refuse cart;

further operating the refuse cart lifter to lift the refuse cart up and towards the refuse collection vehicle and causing the refuse cart lifter to engage the second lifting point of the refuse cart; and

operating the refuse cart lifter still further to empty refuse from the refuse cart into the refuse hopper at a location substantially inward of the lower hopper edge.

12. The method for emptying refuse carts into a refuse collection vehicle of claim 11, where the hopper edge is located along a side of the refuse collection vehicle.

13. The method for emptying refuse carts into a refuse collection vehicle of claim 11, where the hopper edge is located along the rear of the refuse collection vehicle.

14. The method for emptying refuse carts into a refuse collection vehicle of claim 11, further comprising operating a motor to rotate at least one lifting arm, a faceplate containing a saddle, at least one latch arm, and a sliding latch in sliding proximity to the faceplate.

15. The method for emptying refuse carts into a refuse collection vehicle of claim 14, further comprising a sliding latch guide attached to the faceplate in sliding proximity to the sliding latch.